

REMARKS

Claims 1-5 are pending in the present application. The claims were rejected under 35 U.S.C. 103(a) as being unpatentable over Detterman (U.S. Patent 5,912,277) as evidenced by Gray (U.S. Patent 4,123,376) and optionally Eshuis (U.S. Patent 5,635,588). This rejection is respectfully traversed by the attached Declaration of Arthur L. Backman and the arguments below and reconsideration is requested.

In the previous response, Applicants argued that the mean particle diameter of the zeolite, as recited in claim 1, was necessary to achieve smooth extrusion and impact resistance. The Examiner responded that the arguments were merely an opinion of counsel and as such do not take the place of evidence in the record. The Examiner was correct in this assertion. Actual comparative testing results are being submitted with this response in the form of a Declaration.

The enclosed Declaration of Dr. Arthur L. Backman shows the data from experiments with zeolites with a mean particle diameter which are within claim 1 (0.4 μm) and zeolite with a mean particle size outside the claimed range (2.5 μm). The results show that with all other parameters of the CPVC formulation being the same, when a zeolite having a mean particle diameter of 0.4 μm is used the izod impact strength is about 3.5 times higher than when a zeolite with a mean particle diameter above the claimed range is used. Although the larger size (2.5 μm) zeolite gives improved heat stability over the control, the impact strength is reduced to unacceptable levels.

The objective of the present invention is to have CPVC compounds which have smooth surfaces in extrusion along with heat stability and good impact strength. To achieve the good impact strength, it is necessary to use a zeolite that is within the claimed range of mean particle size diameter.

The reference Detterman does not teach or suggest a mean particle diameter for the zeolite. The combination of ingredients in claim 1 (CPVC polymer, impact modifier, zeolite and metal stabilizer) gives unexpected results over the reference cited.

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The rejection has been traversed by the enclosed Declaration of Dr. Backman showing the mean particle diameter of the zeolite is necessary to achieve good impact strength. The Examiner is requested to reconsider and allow the claims.

Respectfully submitted,

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